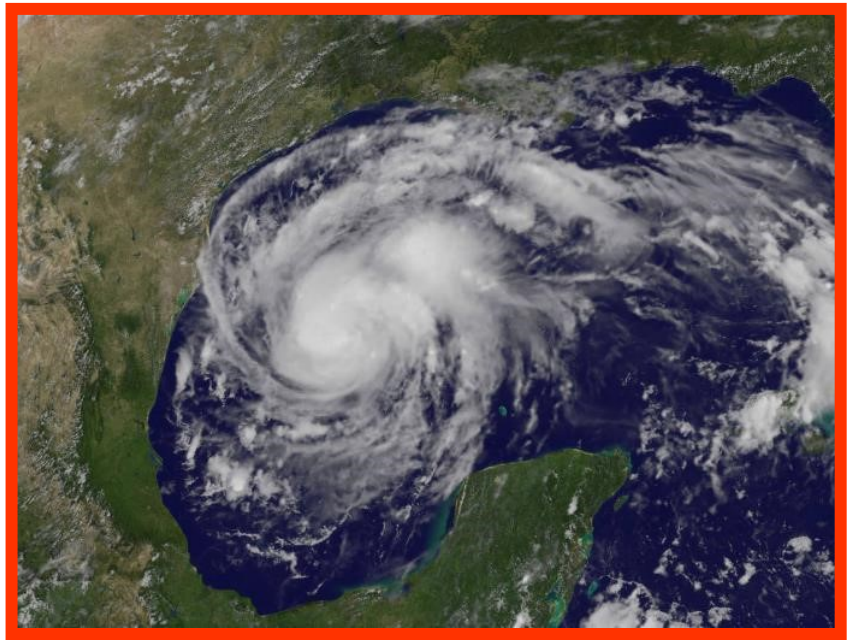
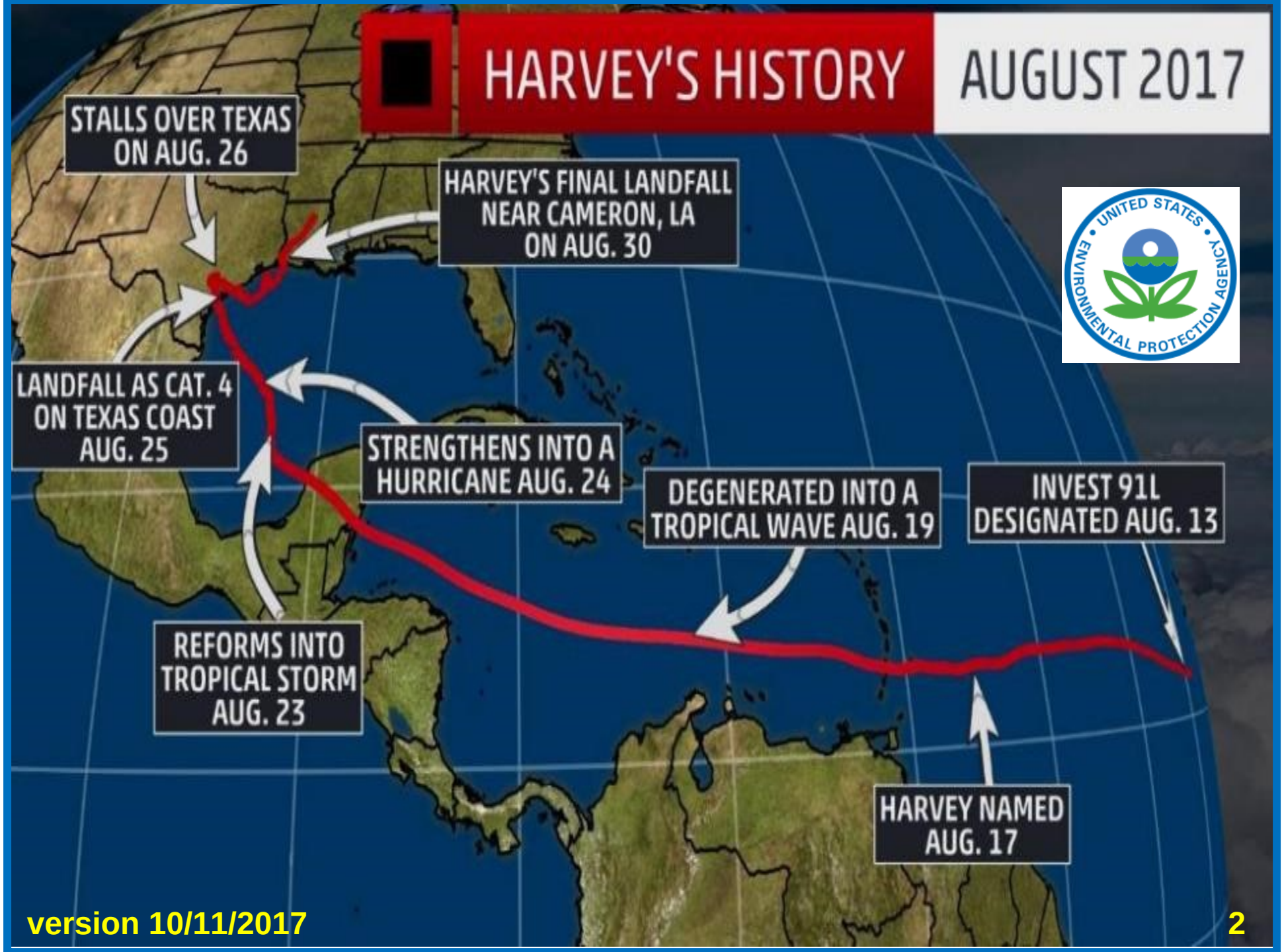


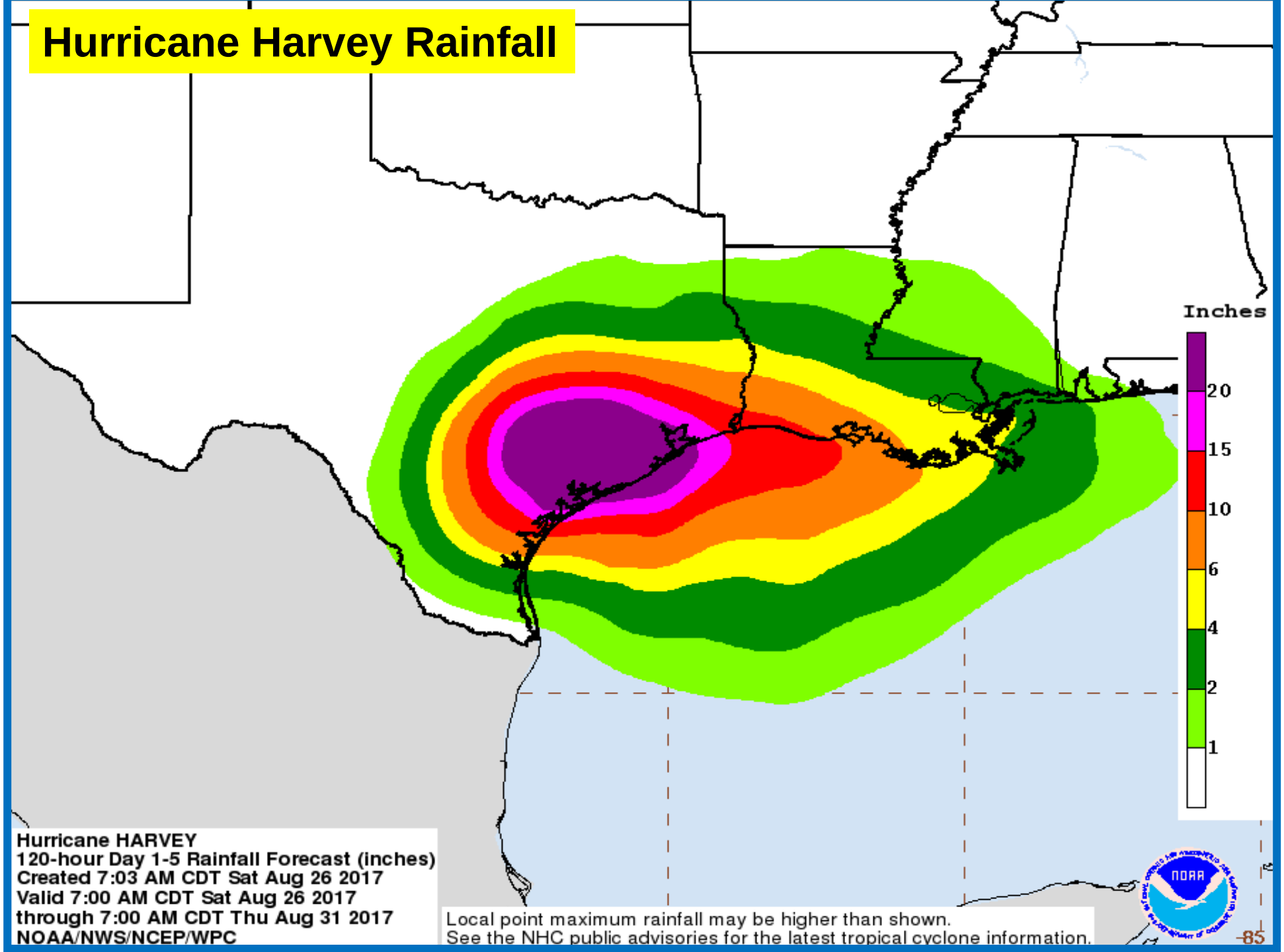
EPA Response to Hurricane Harvey

Carl Edlund
Director, Superfund Division
Region 6

7047178


HARVEY'S HISTORY
AUGUST 2017
STALLS OVER TEXAS ON AUG. 26
HARVEY'S FINAL LANDFALL NEAR CAMERON, LA ON AUG. 30
LANDFALL AS CAT. 4 ON TEXAS COAST AUG. 25
STRENGTHENS INTO A HURRICANE AUG. 24
DEGENERATED INTO A TROPICAL WAVE AUG. 19
INVEST 91L DESIGNATED AUG. 13
REFORMS INTO TROPICAL STORM AUG. 23
HARVEY NAMED AUG. 17
UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
version 10/11/2017
2

Hurricane Harvey Rainfall



UNIFIED COMMAND

RESPONSE OBJECTIVES

- Maximize protection of public, health, and safety.
- Identify and evaluate affected drinking water and wastewater systems
- Identify and address orphaned containers or discharges from vessels and/or facilities
- Identify and address pollution targets.
- Identify and assess Department of Homeland Security critical infrastructure; chemical; and, refining facilities
- Establish and maintain a common operating picture.

RESPONSE OBJECTIVES

- Identify and maximize protection of environmentally sensitive areas and threatened species.
- Manage a coordinated interagency response effort through the Unified Command.
- Establish an Incident Management Team
- Inform the public, stakeholders, and the media of response activities.
- Adhere to appropriate financial accounting practices
- Deploy unique EPA assets to support the unified command response

Unified Command Organization Chart

Incident Name:
Hurricane Harvey – ESF 10 Texas
Operational Period: 09/21/17 to 09/23/17
Prepared by: Maggie Valentine-Graham
Date: 09/20/17
Time: 1800

Incident Command
Gary Moore, EPA
Anthony Buck, TCEQ
Jimmy Martinez, TGLO
CDR Tedd Hutley, USCG
Deputy, LCDR Joel Ferguson, USCG
Deputy Brent Koza, TGLO
Deputy Susan Fisher, EPA
C000

Liaison Officer
LCDR Melissa Owens, USCG
C160

Public Information Officer
PAC Susan Blake, USCG
C140

Safety Officer
George Brozowski, EPA
Edward Primeau, USCG
C130

Data Support Coordinator
Jeff Pritchard, EPA

Operation Section
Joe Davis, EPA
Deputy Renae DiGuardi, TCEQ
LT Jacqueline Fitch, USCG
Bruce Simons, USCG
(See Next Page)
O000

Operations Support
Theresa Holz, START
OY00

Alpha Branch
(Corpus Christi)
(See Next Page)
OB00

Bravo Branch
(Houston)
(See Next Page)
OC00

Charlie Branch
(Port Arthur)
(See Next Page)
OD00

Planning Section
Maggie Waldon, EPA
CWO Pete Gollnick, USCG
P500

Resources Unit
Maggie Valentine, START
YN1 Julie Bosman, USCG
AUX Patrick Hickey, USCG
P510

Situation Unit
Aisha Kennedy, EPA
LT Brian Churchill, USCG
AUX Kevin Cady, USCG
P520

Documentation Unit
Derek Ragon, EPA
Carla Hope, TCEQ
Simone Butler, TGLO
Gena Good, START
BM1 Carolyn Olson, USCG
P530

Data Management Unit
Ping Yang, START
P570

GIS Specialist
Cody Bingham, START
Zack Collins, START
P560

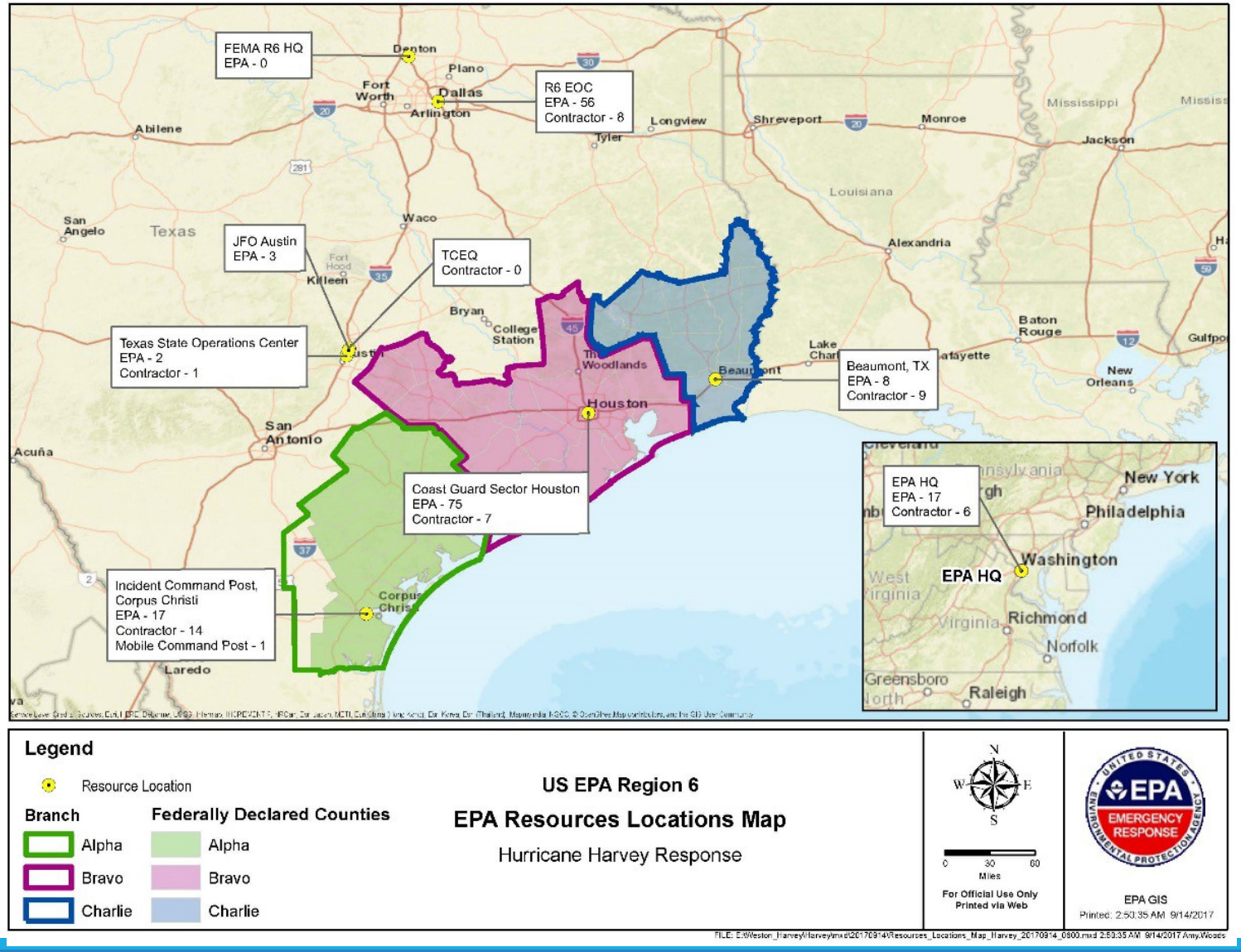
Demobilization Unit
MST2 Stephen McConnell (USCG)
Gena Good, START
(EPA, START, Other)
Tori Gomez, START
P540

Logistics Section
LCDR Jim Erickson, USCG
CWO Sarah Case, USCG
Terry Sullivan, TCEQ
L300

Finance Section
CWO Rob Martin, USCG
Michael Cavanaugh, USCG
F200

Cost & Time Unit
MSTC Anne Marie Borkowski, USCG
F220

EPA Resources



Unified Command Mobile Command Post

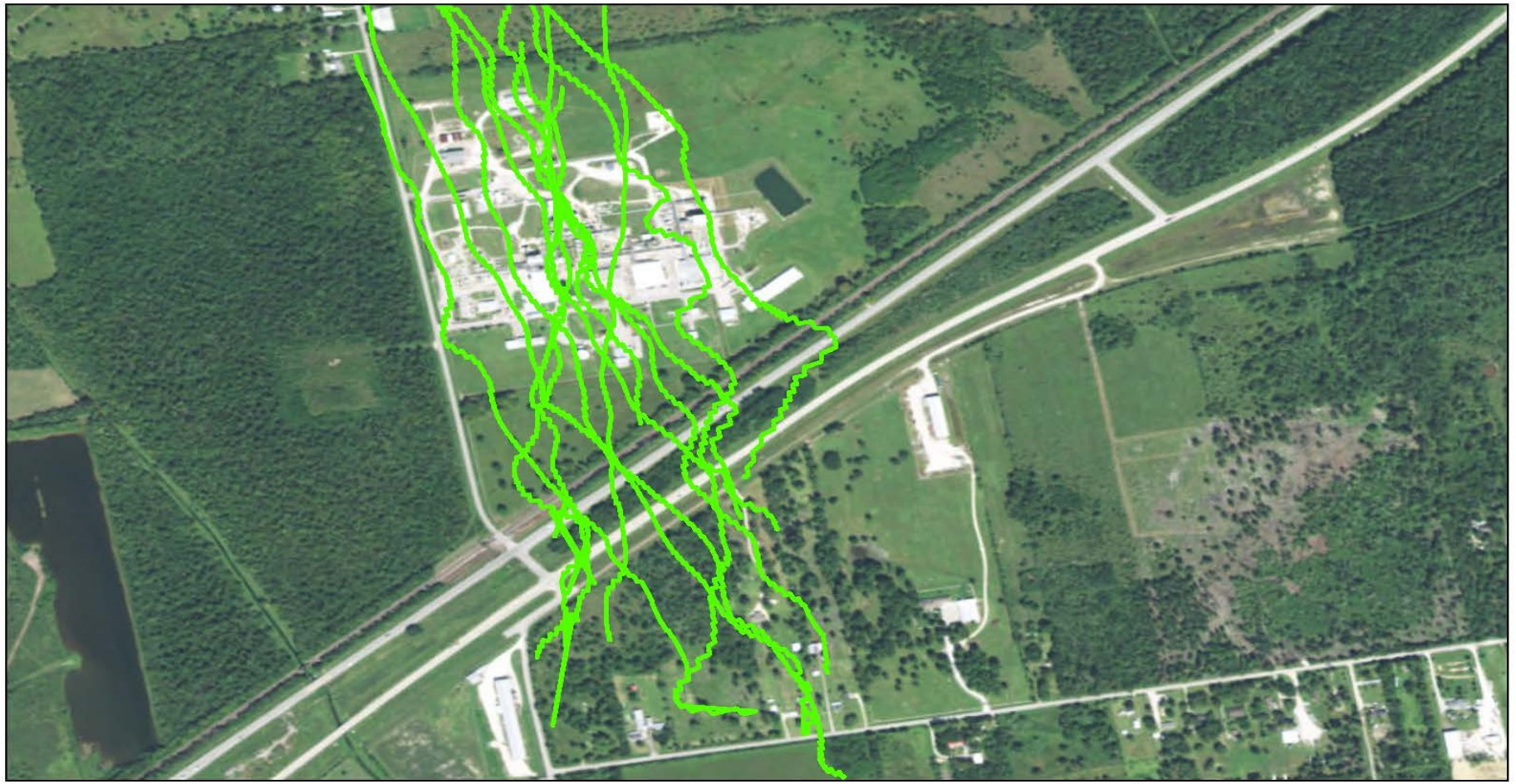
Command & General Staff Meeting

ASPECT Activities

- DHS and DOE requested monitoring
- Pipelines
- Refineries
- Releases at chemical and oil facilities
- Releases and orphan containers


Arkema Chemical Facility, Crosby, TX

ASPECT Flights



Chemical Compounds	Short-term AMCV (ppm)
1,1-dichloroethane	1.0
1-butene	27
acetone	11
dichlorodifluoromethane	10
ethyl acetate	4
ethylene	500
isobutane	33
methyl ethyl ketone	20
methylene chloride	3.4
n-butyl acetate	7.4
n-propyl acetate	2
propylene	Simple Asphyxiant
vinyl chloride	27

Legend

No Readings Above Benchmarks

USA EPA REGION 6
Flight 13 ASPECT

What's an AMCV?
AMCV is a collective term used to describe chemical-specific air concentrations used to evaluate air monitoring data that are set to protect human health and welfare. Short-term AMCVs are based on data concerning acute health effects. **AMCVs** may contain health-based Reference Values (ReVs) and health- and welfare-based ESL values. AMCVs are screening levels used in TCEQ's evaluation of ambient air monitoring data to assess the potential for measured concentrations of specific chemicals to cause health or welfare effects. Health-based AMCVs are safe levels at which exposure is unlikely to result in adverse health effects. ESLs are screening levels used in the TCEQ's air permitting process to establish maximum emission rates that are written into enforceable air permits. Health-based **ESLs** are set 70 percent lower than the safe level, or AMCV. This additional buffer allows TCEQ to take into account exposure to chemicals from multiple sources in air permit reviews.

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Miles

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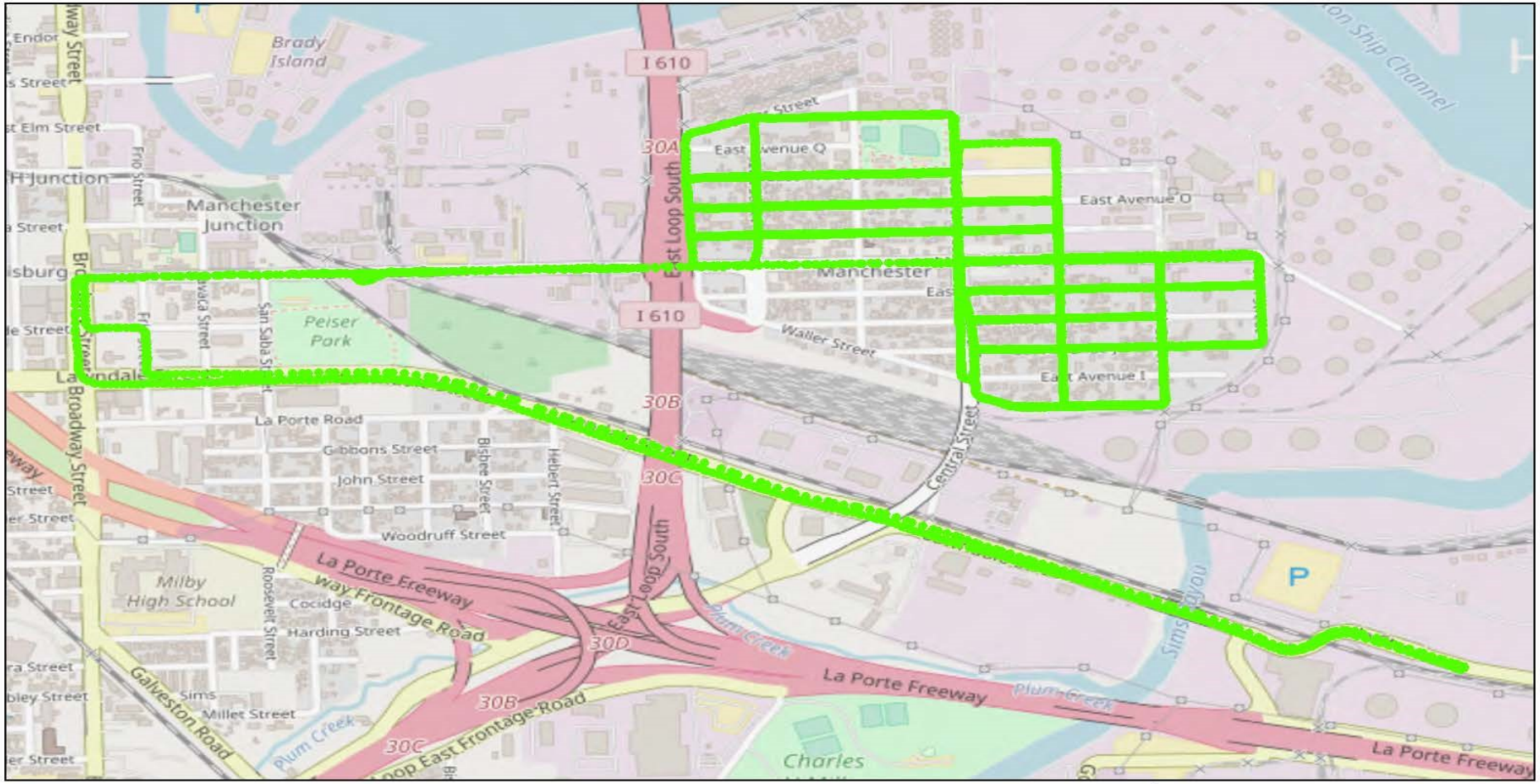
TAGA Activities

- Refinery monitoring
- Sensitive community monitoring
- Chemical manufacturing corridor monitoring



Substance	CAS #	Short-term AMCV Health (ppb)
1,1-dichloroethylene	75-35-4	180
benzene	71-43-2	180
m/p-xylene	179601-23-1	1700
o-xylene	95-47-6	1700
tetrachloroethylene	127-18-4	1000
toluene	108-88-3	4000
trichloroethylene	79-01-6	100

Legend

● No Readings Above Benchmarks

USA EPA REGION 6
TAGA Runs on 20170905

What's an AMCV?
AMCV is a collective term used to describe chemical-specific air concentrations used to evaluate air monitoring data that are set to protect human health and welfare. Short-term AMCVs are based on data concerning acute health effects. **AMCVs** may contain health-based Reference Values (ReVs) and health- and welfare-based ESL values. AMCVs are screening levels used in TCEQ's evaluation of ambient air monitoring data to assess the potential for measured concentrations of specific chemicals to cause health or welfare effects. Health-based AMCVs are safe levels at which exposure is unlikely to result in adverse health effects. ESLs are screening levels used in the TCEQ's air permitting process to establish maximum emission rates that are written into enforceable air permits. Health-based **ESLs** are set 70 percent lower than the safe level, or AMCV. This additional buffer allows TCEQ to take into account exposure to chemicals from multiple sources in air permit reviews.

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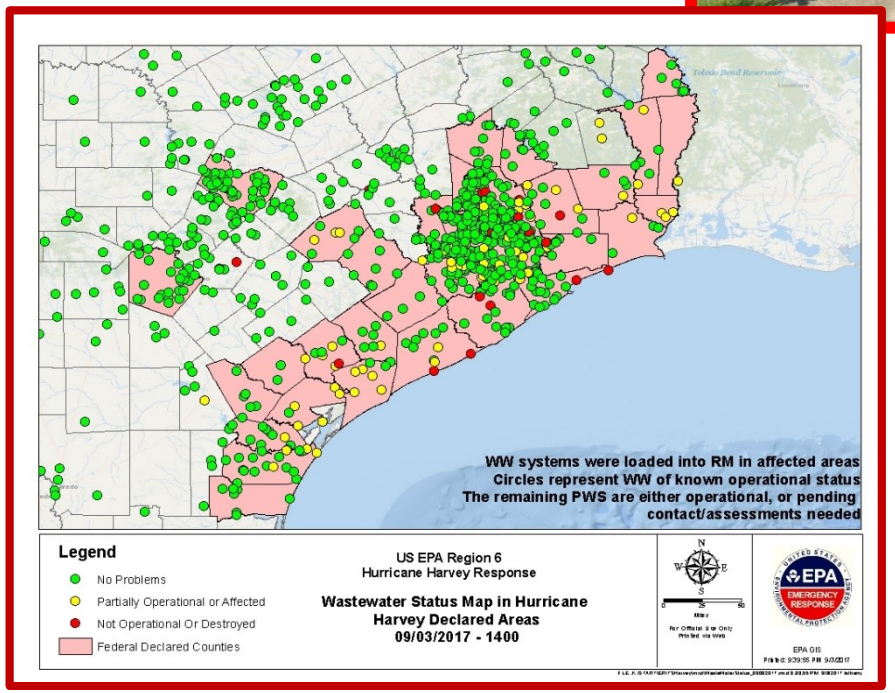
TAGA Product

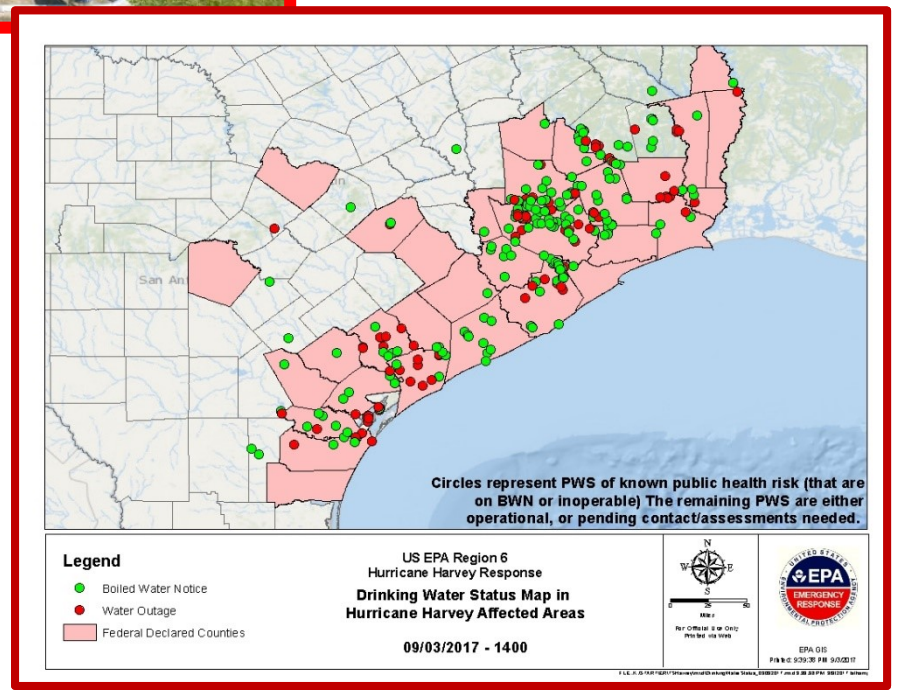
PHILIS Activities

- On- Site Release assessment of analytical services
- Staging area sampling services
- Superfund site assessment analytical services

Drinking Water / Waste Water Assessments

Water Assessment Team –
Houston Area Branch





Superfund Sites

Support to TCEQ / Staging Area Observers

Community Liaisons

Accomplishments

- 130 Hazard Evaluations completed and closed
- 267 spills/discharge investigation completed
- 990 orphan containers recovered
- 567 drinking water assessments completed
- 385 waste water assessments completed
- Daily aerial over-flights for air monitoring
- 7 fuel waivers signed, 7th waiver covers 38 states
- 4 No Action Assurance letters signed
- Ground support air monitoring
- 43 NPL site evaluations completed
- EPA fully integrated with TCEQ and TGLO in Unified Command

Accomplishments

EPA Community Liaisons provided federal and state guidance best practices to thousands of individuals that are dealing with potential hazards in damaged or lost homes.